

# Links to the food web: Zooplankton

Where does  
pelagic fish  
food come  
from?



# Premises

Fish are food limited

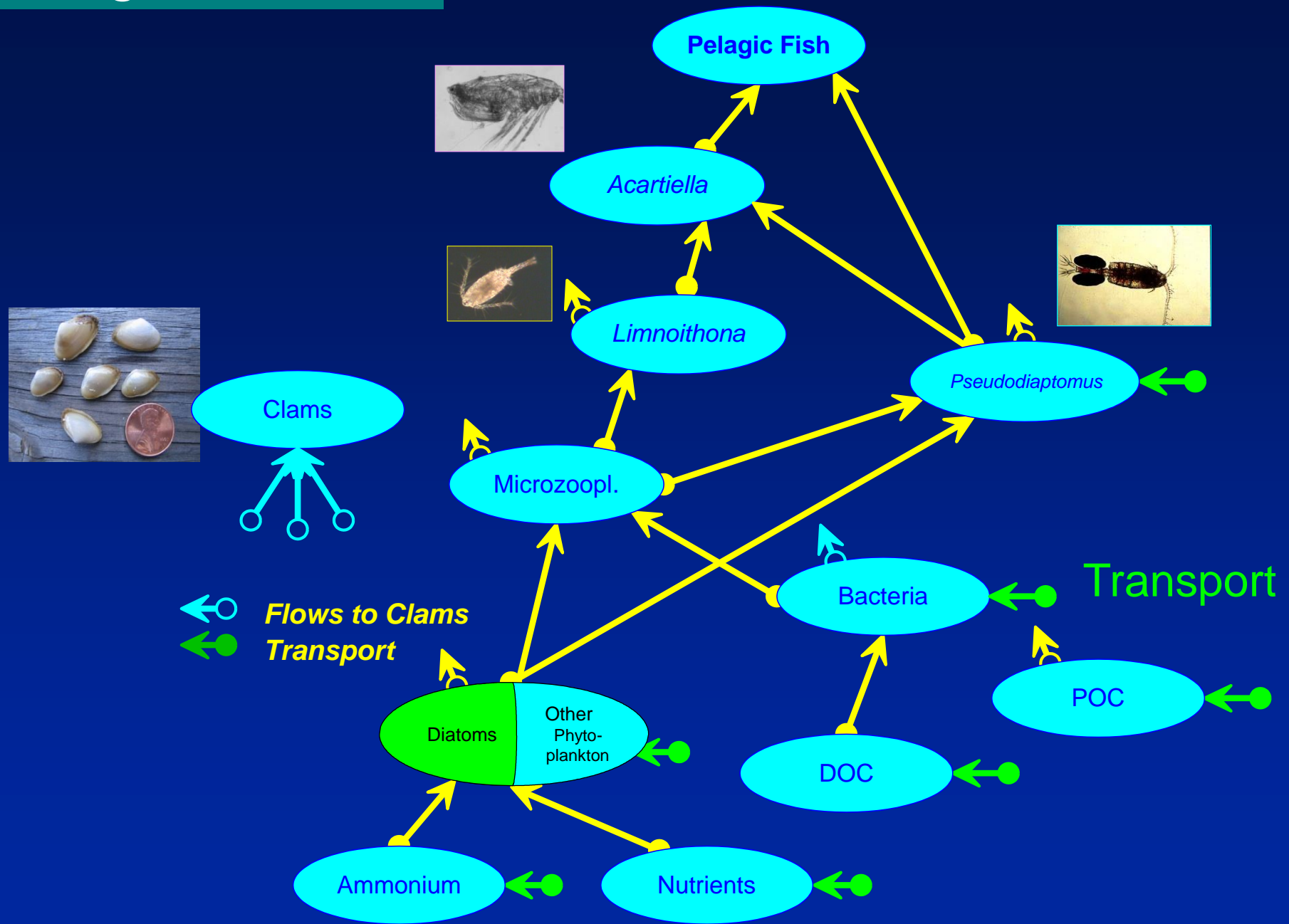
Wetlands are productive

# Questions

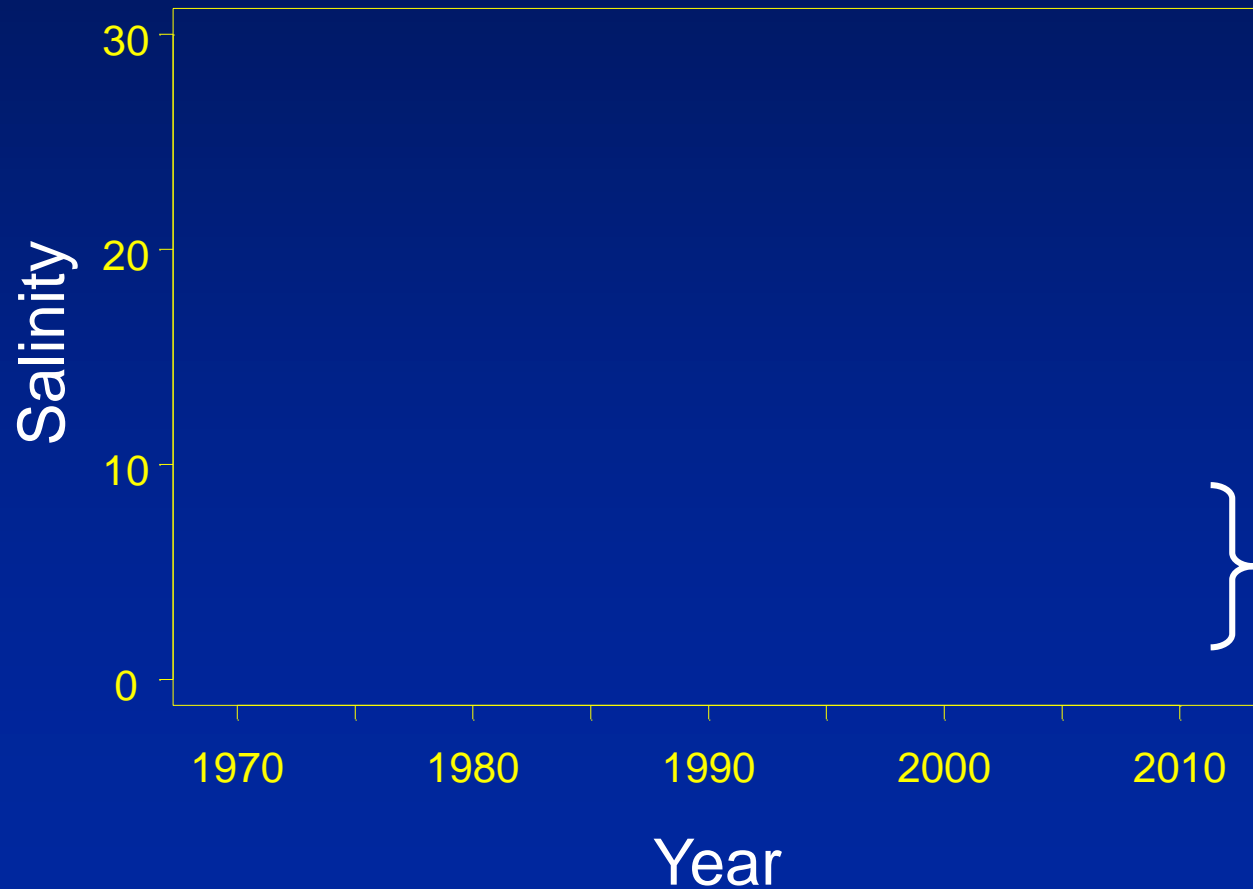
Can wetlands produce food for pelagic fish?

Would this change after WWTP upgrade?

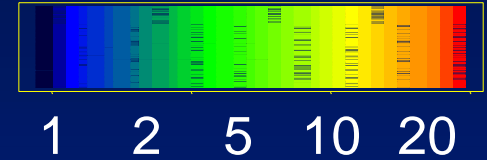
# Pelagic foodweb



# Limits on phytoplankton biomass



May – October  
Chlorophyll,  $\text{mg m}^{-3}$

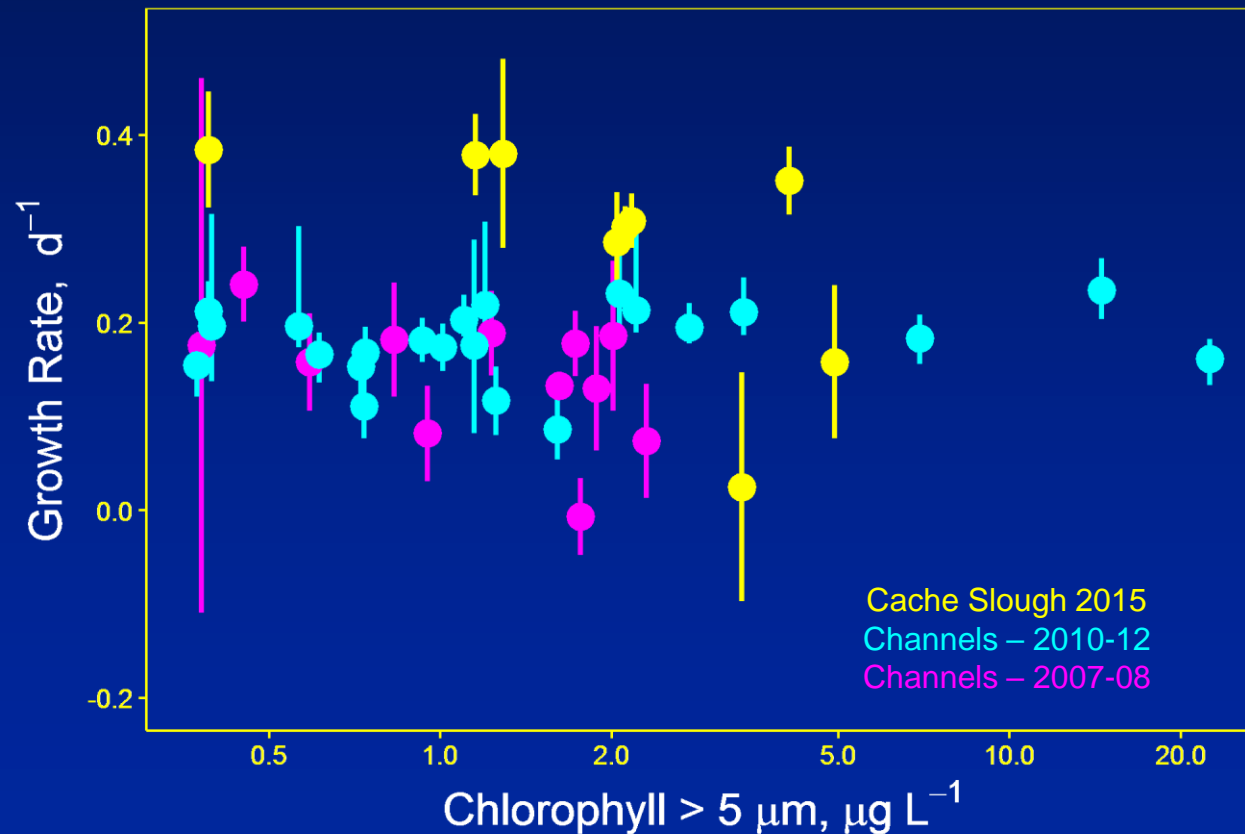


Subsidy

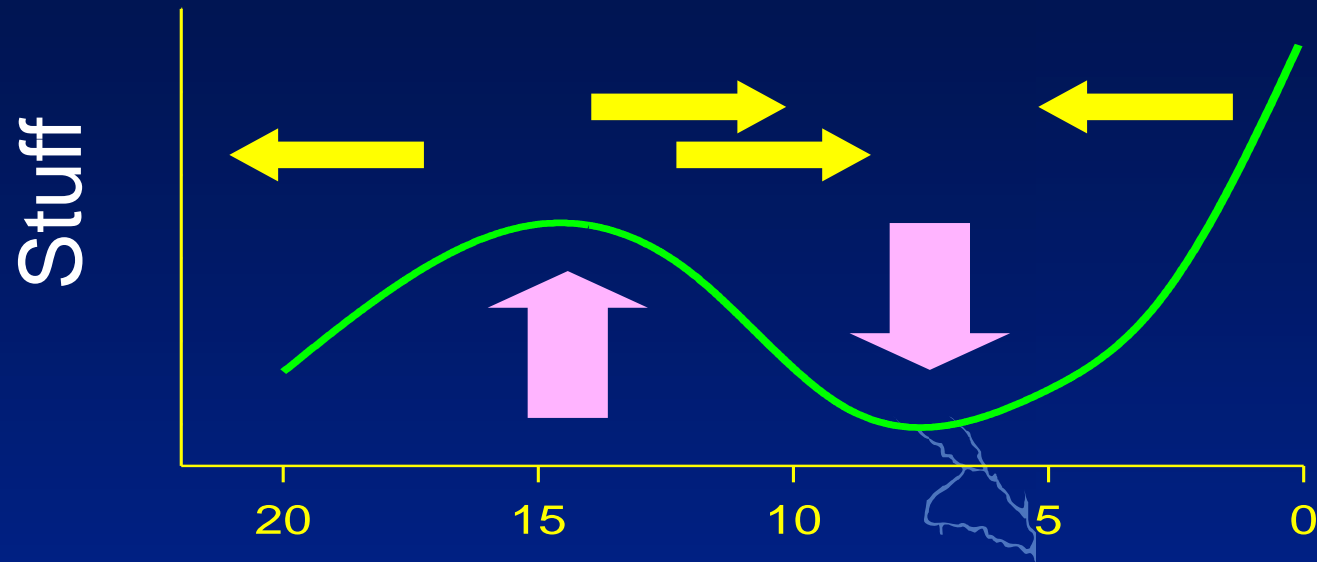
IEP monitoring data  
Kimmerer and Thompson in prep.

# Limits on zooplankton production: slow growth

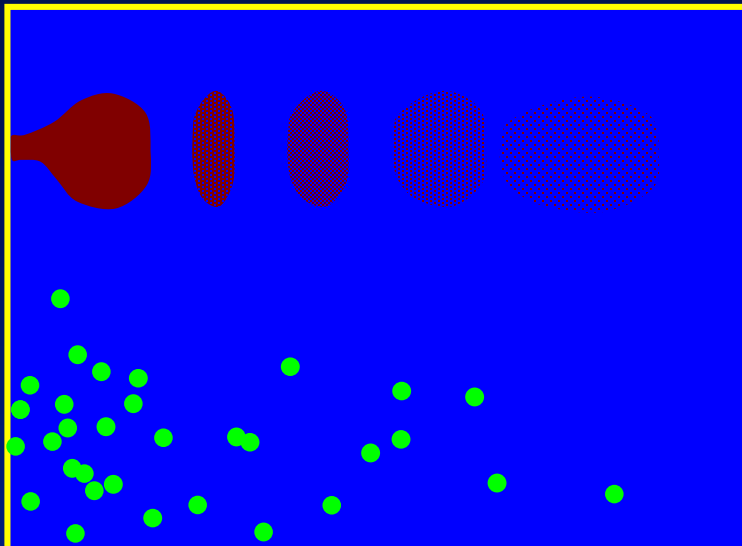
*Pseudodiaptomus forbesi*



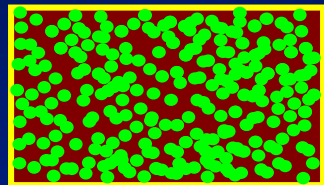
# Subsidies between estuarine regions



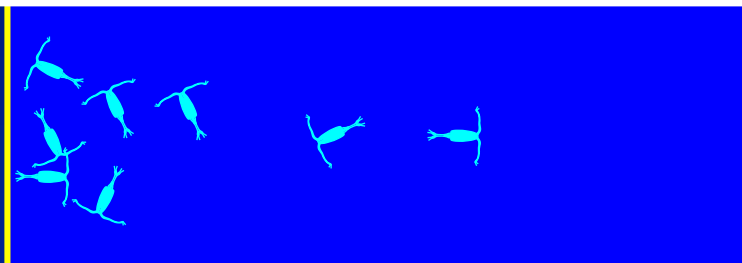
# Subsidies from wetland



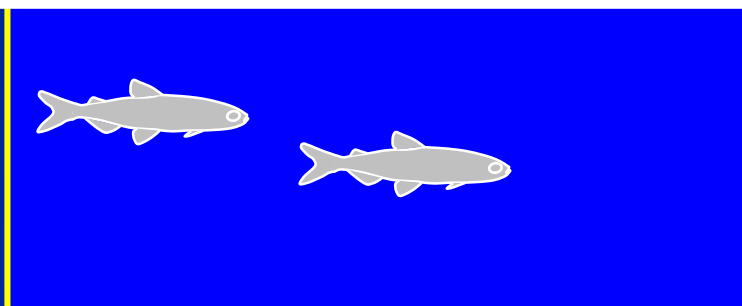
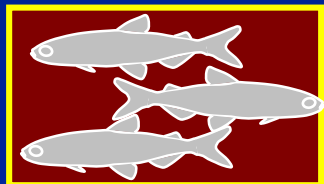
Organic Matter



Phytoplankton



Zooplankton

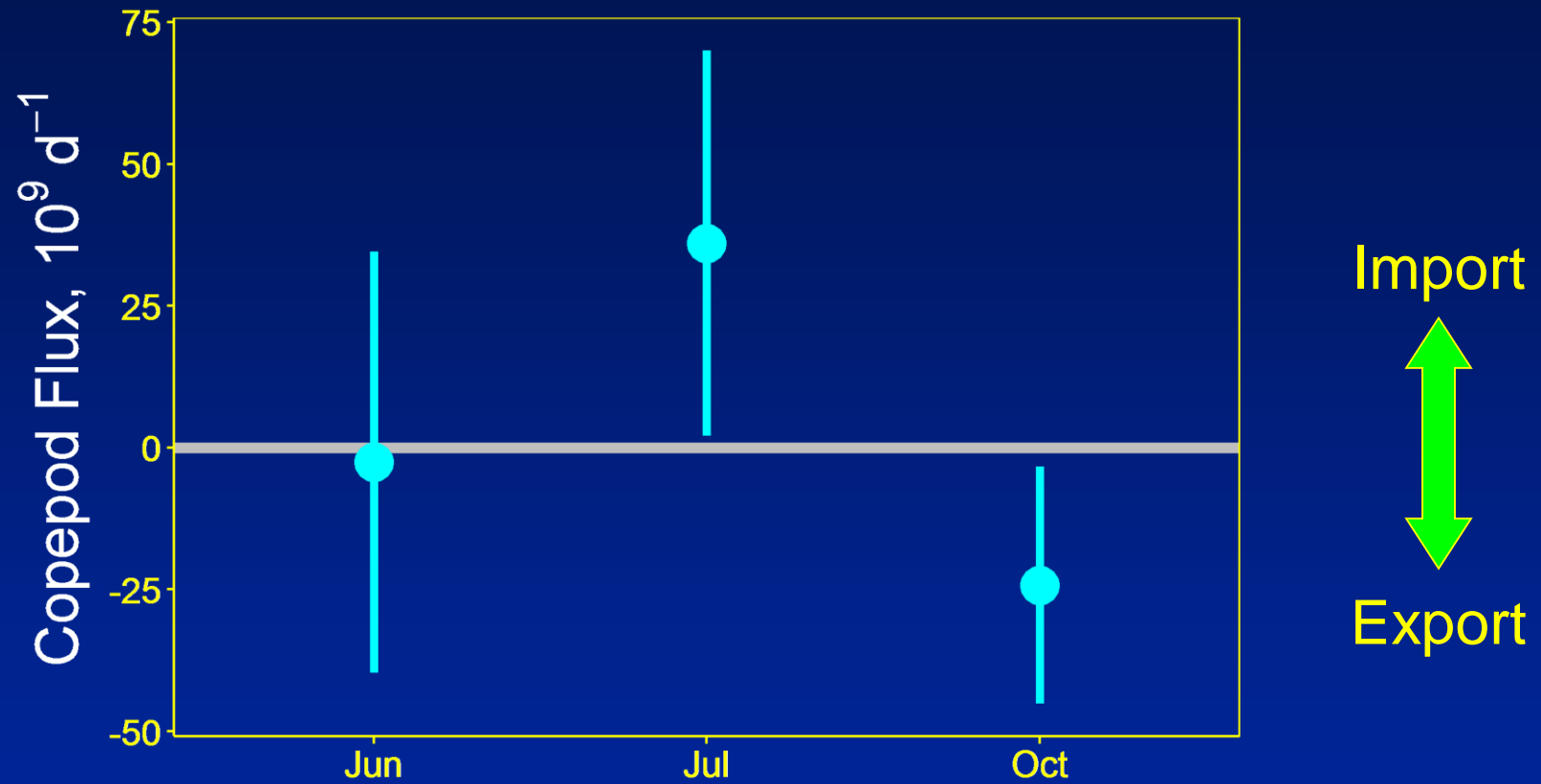


Fish

Restored Marsh

Existing Open-Water Area

# Subsidies from wetland: Liberty Island





# Planned research (three wetland sites)

- **Abundance**

- Transects
- ID life stages
- Reproductive rate
- Stable isotopes
- Ethanol preservation

Night: higher in wetland?

For mortality estimates

Feeding, mortality

Food source, N species?

Molecular diet?

- **Incubations**

- Growth rate
- Calculate mortality

Dependence on diet

From other data

# Expectations for wetlands

Higher growth

Higher mortality (by stage)

Implied flux: into wetland?

Weak link to food indices

N source: ???



